ANTI-FAT AND ANTI-THIN ATTITUDES TOWARD WOMEN

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Anti-Fat and Anti-Thin Attitudes Toward Women

Currently, nearly 70% of American adults are overweight or obese (Obesity Rates and Trends, 2015). Even with overweight Americans vastly outnumbering those who are average and underweight, weight discrimination has been ranked among the most common forms of discrimination, with rates similar to those of racism, sexism, and ageism (Puhl, Andreyeva, & Brownell, 2008; Andreyeva, Puhl, & Brownell, 2008). In addition to discrimination, other forms of weight bias can include private negative thoughts, attitudes, and stereotypes of individuals based upon their weight, and even vicious insults and derogation. Anti-fat bias has been heavily researched for decades and is well established as occurring at institutional levels including employment and the healthcare system (e.g. Roehling, 1999; Judge & Cable, 2010; Ferrante, Piasecki, Ohman-Strickland, & Crabtree, 2009), and in interpersonal relationships and day-to-day interactions (Puhl & Brownell, 2006).

In recent years, there has been public concern about similar biases and negative attitudes toward thin people. Anti-thin bias is commonly perpetuated in advertising, social media, and entertainment. This topic has received very little empirical attention, and not much information about anti-thin bias can be found outside of blogs, magazine editorials, and social media sites like Facebook. There is some evidence however, that thin women are often labeled with characteristics including conceitedness, meanness, and superficiality (Dreisbach, 2012).

Anti-fat and anti-thin bias do not necessarily represent two sides of the same coin, though, so to speak. Rather than occupying opposite ends of the same spectrum, they may be two distinct phenomena. Anti-fat bias is a longstanding, systematic form of oppression that occurs in virtually every setting, whereas anti-thin bias is seemingly much more recent, and has not yet been empirically shown to occur at any institutional levels. Accordingly, the goal of this research

is to separately examine anti-fat bias and anti-thin bias aimed at women. This will be accomplished through analysis of weight-related stereotypes, bias, and perceptions about quality of life for women of different weights. This study will begin to fill the void of empirical information about anti-thin attitudes, while also illuminating the ways in which anti-thin and anti-fat biases are similar and different.

Anti-Fat Attitudes

At the most basic level, an attitude is an individual's tendency to evaluate a certain attitude object with a degree of favorability or unfavorability (Eagly & Chaiken, 2007). When the attitude object is a social group or member of a social group, attention must be given to how evaluations manifest into stereotypes, prejudice, and discrimination. Simply put, stereotypes are generalized beliefs about positive or negative characteristics of a group, while prejudice involves the thoughts and feelings regarding a group or member, often, although not always, involving dislike or antipathy based on group membership. Discrimination refers to actually treating others differently based on group membership (Bodenhausen & Richeson, 2010).

Anti-fat attitudes can appear at many different institutional levels. In the workplace, stereotyping and discrimination against overweight individuals is pervasive. In his review of research on weight-based discrimination in employment, Roehling (1999) found that overweight individuals are stereotyped as lazy, lacking in self-discipline, less conscientious, sloppy/untidy, having poor personal hygiene, more likely to have an emotional problem, less likely to get along with others, and more likely to be absent. Overweight individuals are less likely than equally qualified, lighter weight persons to be hired, and overweight and obese women earn less money than average-weight women. These demonstrations of anti-fat attitudes occur in every area of employment from hiring and promotions, to discipline and dismissal (Roehling, 1999).

Additionally, what Roehling stated in 1999 regarding legal protection still holds true today: workplace discrimination based on weight is not illegal in the U.S. (although morbid obesity is considered a disability and therefore protected from disability discrimination; U.S. Equal Employment Opportunity Commission, n. d.). In education, school staff are not immune to endorsing anti-fat stereotypes. For example, in one study, high school faculty members reported that obese people are less healthy, more self-conscious, and feel that they are not as good as non-obese persons. They also endorsed the belief that obesity is caused primarily by poor eating habits (Neumark-Sztainer, Story, & Harris, 1999). In higher education, specifically graduate school, higher BMI applicants were found to be less likely to be offered admission to an institution than applicants with lower BMIs, but only following an in-person interview (Burmeister, Kiefner, Carels, & Musher-Eizeman, 2013). In law, a study on perception of guilt revealed an interesting interaction: men (but not women) perceived an obese woman as more likely to be guilty and more likely to re-offend than a thinner woman (Schvey, Puhl, Levandoski, & Brownell, 2013). Even in medicine, healthcare professionals display many of these negative attitudes towards obese individuals. In one study, professionals—including physicians and nutritionists—indicated generally negative implicit attitudes towards overweight individuals and endorsed the stereotype that the overweight are lazy (Teachman & Brownell, 2001). Physicians also frequently report believing that obese patients have poor eating habits, lack the self-discipline and motivation to lose weight, and want an easy way out (Ferrante et al., 2009).

Anti-fat attitudes are also unavoidable in everyday life. Stereotypes about the overweight are perpetuated in advertising and marketing. For example, the group *People for the Ethical Treatment of Animals* (PETA) has had multiple fat-shaming ads and billboards insinuating that obese people should cut meat from their diets to lose weight (Bramblette, 2014). In movies and

TV, the term “fattertainment” is used to describe the demeaning portrayal of the overweight, often considered one of the few stigmatized groups left that can still be mocked and degraded with little complaint from the general public (Heuer, n.d.). In fact, compared to lighter-weight television characters, heavier male characters are less likely to be employed, less likely to talk about dating, and more likely to be shown eating; whereas heavier female characters are less likely to have romantic attractions and less likely to be deemed attractive (Greenberg, Eastin, Hoftshire, Lachlan, & Brownell, 2003). Furthermore, the variability in body type portrayed on television falls short of resembling real life. For instance, although in the United States over 25% of women and about 40% of men are overweight, only 10% of female, and 17% of male TV characters are (Greenberg et al., 2003).

Overweight persons also are on the receiving end of bias in their interpersonal relationships and interactions. Commonly reported experiences include people making negative assumptions about them, physical barriers like not fitting in public spaces, and negative comments from family (Puhl & Brownell, 2006). Much of this stigma comes from close sources including family members, doctors, classmates, friends, and coworkers, as opposed to strangers (Puhl & Brownell, 2006). It also appears that individuals may have feelings of actual disgust toward the obese that could be due to the belief that it was self-degrading behaviors that caused them to become obese (Vartanian, Trewartha, & Vanman, 2016). This disgust may cause people to view obese persons as lazy and overindulgent, as well as less motivated, self-disciplined, competent, and hygienic; it may also lead people to desire distance from obese persons (Vartanian et al., 2016). In addition, there is evidence that this kind of bias begins at a very young age. Even children as young as five years old stereotype heavier children as having less athletic, academic, artistic, and social abilities (Penny & Haddock, 2007). Similar to adolescents

and adults, children also rate thinner adult bodies as more attractive than larger ones (Brown & Slaughter, 2011).

Gender and Anti-Fat Attitudes

An important characteristic in weight evaluations is gender. Research suggests that men tend to show more negative attitudes toward the overweight compared to women. For example, in one study, men were higher in several dimensions of anti-fat prejudice, including viewing overweight people as unattractive, judging them negatively, desiring distance from them, and believing they do not deserve equal rights (O'Brien, Latner, Ebneter, & Hunter, 2013). Relative to women, men have also been shown to be higher in dislike of overweight/obese people, they are more likely to hold the belief that being overweight is due to lack of willpower (Crandall, 1994; Lieberman, Tybur, & Latner, 2012), they are more likely to blame overweight persons for their weight, and they have higher levels of weight bias (Lieberman et al. 2012).

Not only do men and women evaluate weight differently, but they also have their weight evaluated differently. In fact, anti-fat bias and stereotypes are often directed more strongly, if not entirely toward women. In Schvey and colleagues' (2013) research on perception of guilt, judgments of heavy and thin men did not differ; it was only heavy women who were perceived as more likely to be guilty. Another domain affecting women is employment and salary. It has been shown that increased weight is negatively associated with the salary of women but not men (Roehling, 1999). Other research has found that weight gain does have an impact on the salary of men and women, but in different ways. Men's salary actually increases as they gain weight, until they reach above-average weight, after which weight gain begins to have a negative effect (Judge & Cable, 2010). Women's salary is negatively affected by any weight gain, and this effect is even stronger the thinner they are to begin with (Judge & Cable, 2010). Finally, there is even

evidence that parents are less willing to pay for college for their overweight daughters, but not for their overweight sons (Crandall, 1995). Given the pervasive influence gender has on how their weight is perceived, the present research examined weight attitudes directed solely at women.

Anti-Thin Attitudes

Although bias against overweight individuals is well-documented, empirical research on anti-thin bias is scarce at this time. Celebrities and females of all ages have spoken out about their "skinny-shaming" experiences, like being told to eat more, being accused of having an eating disorder (Radkin, 2014), being bullied on social media (Korssen, 2016), and being denounced as a poor body image exemplar for younger girls (Sanghani, 2015); however, science has yet to deeply and extensively examine and understand this bias.

At least one study found support for anti-thin attitudes by employing a comparison of underweight, normal weight, and overweight bodies. Malloy and colleagues (2012) asked participants to rate virtual images of bodies with BMIs ranging from underweight to obese. Both the lower and higher weight bodies were rated most negatively, whereas people of weights in the middle were rated most positively, showing a curvilinear relationship between targets' weight and judgments. Additionally, journalists for *Glamour* magazine, working with researcher Rebecca Puhl, examined stereotypes of both thin and fat women in an online survey. They found that thin women were rated as being mean, conceited, superficial, controlling, and vain. Further, their research found that, like overweight people, thin people demonstrated no ingroup bias, evaluating other thin individuals in the same negative light (Dreisbach, 2012).

Anti-thin attitudes are often overlooked in research because of a common method of splitting target stimuli into overweight/obese or not overweight/obese. This dichotomous

comparison ignores the important distinction between two categories, specifically, those who are underweight and average weight. When participants compare thin and overweight bodies, they prefer the thinner body. However, it is possible that thinner bodies are not preferred to normal weight bodies, and in such a comparison, would be evaluated more negatively, such as Malloy and colleagues (2012) found. To address this limitation of most previous research, the present study asked participants to indicate their attitudes toward three weight categories individually—underweight, average weight, and overweight—rather than combining underweight and average weight. This allowed for comparison of participants' thoughts and feelings about women in each weight group.

The Role of Social Desirability

Given the generally undesirable nature of prejudice, it is important that this study account for any attempts by participants to try to conceal these biased attitudes through socially desirable responding, which involves responding to self-report items in a way that is motivated not by the item's content, but rather by the desire to appear favorable in the eyes of others (Tracey, 2016; Paulhus, 1991). As a form of dishonesty, social desirability (SD) poses a potential threat to the validity of self-report measurements (Paulhus, 1991). In fact, one meta-analysis of over 14,000 studies found that only 0.2% measured socially desirable responding, and of those studies, 43% found that social desirability significantly influenced their results (van de Mortel, 2008). Another meta-analysis of over 3,700 participants found that contrary to popular belief, unproctored web-based assessments do not yield lower social desirability scores compared to paper-and-pencil assessments (Gnambs & Kaspar, 2016). Because this research involved an online study on a topic that participants may wish to mask, a measure of SD was included.

The questions posed for the present study were as follows:

Research Question 1A: Are overweight/obese women rated higher than underweight/thin and average weight women in negative anti-fat stereotypes, such as *unmotivated*, *slow*, and *insecure*, and what is the effect of participant gender on these ratings?

Research Question 1B: Are underweight/thin women rated higher than overweight/obese and average weight women in negative anti-thin stereotypes such as *superficial*, *mean*, and *conceited*, and what is the effect of participant gender on these ratings?

Research Question 2: What is the level of bias against overweight, average weight, and underweight women, and what is the effect of participant gender on bias scores?

Research Question 3: How do participants rate the quality of life for overweight, average weight, and underweight women, and what is the effect of participant gender on quality of life ratings?

Method

Participants

Participants were required to be at least 18 years old, and have lived their entire life in the United States, to ensure similar sociocultural backgrounds. Participants were recruited online primarily through Amazon Mechanical Turk (MTurk) and an email listserv at Ball State University, as well as through various other websites (e.g. Facebook, Social Psychology Network). Participants from MTurk were paid $0.15 for participation, while participants from other sources had the option to enter their email address in a drawing for one of two $25 Amazon e-gift cards.

A total of 117 participants were removed from the final dataset for reasons including not living in the U.S. their entire lives, missing two attention check questions, giving unrealistic body measurements (e.g. 60 feet tall), and not providing enough usable data for analyses. The

final sample consisted of 323 participants. The sample was 82.4% white, 7.4% black, 4% multiracial, 2.8% Hispanic, and 1.9% Asian. Most participants were women (72.4%); 24.5% were men, 0.9% (n=3) were transgender, and 1.2% (n=4) selected "other" as their gender. Ages ranged from 18-76 (*M*= 30.86 years, *SD*= 13.6), and a large majority of the sample (86.7%) had at least some college education. Over a quarter of the sample was overweight (26.9%), 20.1% were obese, 41.8% were normal weight, and only 5.3% were underweight; 5.9% (n=19) did not indicate their weight.

Measures

Stereotypes. Weight-related stereotypes were examined using a set of 18 semantic differential items rated on a 5-point scale. This set included eight stereotypes, many derived from Dreisbach (2012), that are typically associated with thin women (e.g. ***conceited****-modest****, mean****-kind*). The measure also included ten stereotypes, some from the Fat Phobia Scale (Bacon, Scheltema, Robinson, 2001) that are typically associated with overweight/obese women (e.g. ***lazy****-industrious****,*** *secure-****insecure***). See Appendix A for the complete list of stereotype items. These items were summed, and higher scores indicated more stereotypical beliefs. Both anti-thin and anti-fat stereotype items displayed acceptable reliability: anti-fat stereotypes had an internal consistency α (Cronbach's alpha) score of .78, and anti-thin stereotypes had an internal consistency score of α = .87.

Weight bias. Participants' bias scores were derived by summing 10 items measuring prejudice and discrimination based on weight. Each of these items was rated on a 7-point Likert-type scale ranging from *strongly disagree-strongly agree*. Many of these items were adapted from existing weight bias measures including the Revised Anti-Fat Attitudes Scale (Wrench &

Knapp, 2008; Morrison, & O'Connor, 1999), and the Anti-Fat Attitudes Questionnaire (Crandall, 1994; Setchell, Watson, Jones, Gard, & Briffa, 2014). The items examine dislike or antipathy toward a weight category (*[Thin/Average/Overweight] women are not sexually attractive*; *I dislike women who are [thin/average/overweight]*), and differential treatment toward a weight category (*If I were an employer looking to hire, I might avoid hiring a [thin/average/overweight] woman*). Items were adapted to refer to each of the three weight categories, and to women specifically. For example, an item borrowed from the Revised Anti-Fat Attitudes Scale (Wrench & Knapp, 2008; Morrison, & O'Connor, 1999) reads "*Fat people make me feel somewhat uncomfortable."* This item appears in each section, with the word *fat* being interchanged with *overweight/obese, average weight,* or *underweight/thin,* and the word *people* replaced with *women.* Higher scores on this measure indicate higher bias against the respective weight category (see Appendix B for bias items). Weight bias items displayed excellent reliability with $\alpha = .92$.

Quality of Life (QOL). Perceived quality of life of each weight category was measured using the World Health Organization Quality of Life BREF Field Trial Version (WHOQOL-BREF; World Health Organization, 1996). This measure is intended for individuals to answer their satisfaction with their own quality of life. This study adapted these items such that participants could rate quality of life dimensions for each weight category on a scale ranging from 1 (*very low*) to 5 (*very high*). This scale tapped into physical and psychological domains of quality of life and included both positive and negative facets (e.g., *enjoyment of life, acceptance of bodily appearance*; *physical pain, frequency of negative feelings*). See Appendix C for QOL items. Quality of life items displayed excellent reliability with $\alpha = .93$.

Social desirability. Social desirability was measured using the Social Desirability Scale - 17 (SDS-17; Stöber, 2001). This scale utilizes 16 true/false items, with higher scores indicating

higher social desirability. This measure showed acceptable internal consistency with $\alpha = .78$, slightly higher than the alphas attained during scale development ($\alpha = .70$-$.75$; Stöber, 2001). Social desirability scores can be used to simply exclude participants who score highly (Paulhus, 1991), or they can be correlated with variables of interest in the hopes of having very low correlations (Fisher & Katz, 2000). The latter option was used here.

Procedure

Participants first completed demographic items including their age, gender, and education level. They also reported their height and weight to calculate BMI. The next section examined weight-related attitudes by presenting the three weight categories in random order. In each category, participants first completed the stereotype endorsement items, for which they were asked to indicate their thoughts/feelings/attitudes regarding [overweight/obese; average weight; underweight] women. They next completed the bias items, for which they were asked to indicate their level of agreement with each statement. Lastly, participants completed the QOL items, for which they were asked to indicate how high or low they believe [overweight/obese; average weight; underweight] women are on each dimension. Following the evaluation of weight-based attitudes toward each group of women, participants completed the measure of social desirability, after which they were given the option of entering their email address in the e-gift card drawing before exiting the survey.

Results

Overview

To analyze stereotype ratings, weight bias scores, and quality of life ratings, 3 (Target Weight Category: overweight/obese, average weight, underweight/thin) X 2 (Participant Gender: male or female) repeated measures factorial ANOVAs were utilized, with Target Weight as the

repeated measures variable and participant gender as a between-subjects variable. For all ANOVAs, the assumption of sphericity was violated; as such, the Greenhouse-Geisser correction was used. Stereotype and QOL ratings were not normally distributed due to high frequencies of scores at each of the scales' midpoints; however, it did not appear problematic enough to warrant other statistical methods. Normality was satisfactory for bias scores. All other assumptions (independence, scale of measurement, and homogeneity of variances) were satisfactory in each analysis.

Stereotypes

Because there are no established measures of anti-thin attitudes or stereotypes, and very little research on the subject, an exploratory factor analysis was performed on the 18 stereotype items to ensure that they could in fact be grouped into anti-fat stereotypes and anti-thin stereotypes. Principal Axis Factoring in combination with Promax rotation supported this for each of the three weight evaluation sections. Using a cutoff factor loading of .30, the majority of the items loaded as expected. One intended anti-thin item (*unassertive-controlling)* did not load above this cutoff on either factor and was therefore removed. Also, one intended anti-fat item (*intelligent-unintelligent)* loaded consistently above the .30 cutoff with the anti-thin stereotypes and was moved to that factor instead. In total, there were nine anti-fat stereotypes and eight anti-thin stereotypes. See Tables 1, 2, and 3 for Exploratory Factor Analysis results.

The first repeated measures factorial ANOVA, analyzing anti-fat stereotypes, indicated that there was no interaction between weight category and gender, but there was a statistically significant main effect for both weight category F (1.92, 571.10) = 70.75, $p < .001$, $\eta = .19$, and gender F (1, 297) = 6.22, $p = .013$, $\eta = .02$. Post hoc comparisons using the Bonferroni correction indicated that anti-fat stereotype ratings were higher for overweight women (M =

29.53) compared to women who were average weight (M = 24.13) and underweight (M = 25.57, ps < .001). Underweight women were also rated higher in anti-fat stereotypes than average weight women (p = .002). Furthermore, male participants (M = 26.88) rated women higher in anti-fat stereotypes overall compared to female participants (M = 25.94, p = .02). Thus, to answer Research Question 1A, overweight/obese women were rated higher than both average weight and underweight/thin women in anti-fat stereotypes. Furthermore, male participants reported higher anti-fat stereotype ratings overall compared to female participants.

Research Question 1B sought to assess if underweight/thin women were also rated higher than overweight and average weight women in stereotypes associated with their weight group. The ANOVA resulted in a significant interaction between weight category and gender F (1.81, 534.26) = 3.7, p = .031, η = .01. To examine this interaction, targeted hypotheses were analyzed using the Bonferroni Inequality. These analyses indicated that underweight women were rated higher in anti-thin stereotypes than both overweight and underweight women t (3, 296) = 11.76, p < .05. Furthermore, compared to female participants, male participants rated overweight women higher in anti-thin stereotypes t (3, 295) = 4.22, p < .05, but they did not rate underweight women higher in these stereotypes, t (3, 295) = .01, *ns*. The answer to Research Question 1B is therefore that underweight women were rated higher in anti-thin stereotypes than both overweight and average weight women, and that the effect of gender only mattered for ratings of overweight women: male participants rated overweight women higher in anti-thin stereotypes than female participants. Male and female participants did not differ in the stereotypes attributed to underweight women (see Table 4).

Weight Bias

This ANOVA resulted in a significant interaction between gender and weight category F (1.95, 582.48) = 18.20, $p < .001$, $\eta = .06$. Targeted hypotheses using the Bonferroni Inequality were used to analyze this interaction. The first hypothesis examined weight bias against each weight group, and found that anti-fat bias was higher than both anti-thin and anti-average bias t (5, 299) = 14.17, $p < .05$. The next hypothesis indicated that anti-thin bias was also higher than anti-average bias t (5, 299) = 11.56, $p < .05$. Two further hypotheses indicated that male participants were higher than their female counterparts in anti-fat bias t (5, 299) = 3.92, $p < .05$, but not anti-thin bias t (5, 299) = .88, *ns*. A final targeted hypothesis indicated that the difference between males' and females' anti-fat bias was larger than the differences between their anti-thin and anti-average bias scores t (5, 299) = 13.46, $p < .05$.

These analyses indicate that the answer to Research Question 2 involves several components: (1) anti-fat bias was higher than both anti-thin and anti-average bias, (2) anti-thin bias was also higher than anti-average bias, (3) male participants were higher than female participants in anti-fat bias, but not anti-thin bias, and (4) the difference between males' and females' anti-fat bias scores was larger than the differences between males' and females' anti-thin and anti-average bias (see Table 5).

Quality of Life

For QOL, there was no interaction between the variables, and there was only a significant main effect for weight category F (1.92, 544.84) = 170.95, $p < .001$, $\eta = .38$, with no effect of participant gender ($p = .446$). Pairwise comparisons using the Bonferroni correction revealed that QOL for average weight women ($M = 54.85$) was rated higher than it was for both overweight ($M = 41.92$, $p < .001$) and underweight ($M = 49.95$, $p < .001$) women. Further, QOL for

underweight women was higher than it was for overweight women ($p < .001$). To answer Research Question 3, perceived quality of life was rated highest for average weight women, lowest for overweight/obese women, and in between for underweight/thin women, with participant gender having no effect (i.e., males' and females' ratings were not significantly different). See Table 6 for means.

Social Desirability

Female participants' responses appear to have been more affected by socially desirable responding than male participants', even though females ($M = 8.61$) did have slightly lower SD scores overall than did males ($M = 9.10$). Interestingly, for both male and female participants, SD was related almost exclusively to evaluations of average weight women, and not overweight and underweight women. Female participants' SD scores were negatively correlated with three of the four evaluations of average weight women: anti-fat stereotype ratings ($r = -.16$, $p = .016$), anti-thin stereotype ratings ($r = -.14$, $p = .034$), and quality of life ratings ($r = -.20$, $p = .003$). They were also correlated with anti-thin stereotype ratings of underweight women ($r = -.18$, $p = .008$). In other words, as female participants' social desirability scores increased, they rated average weight women lower in negative stereotypes, but also lower in QOL; additionally, they rated underweight women lower in anti-thin stereotypes. Male participants' SD scores were only positively correlated with average weight quality of life ratings ($r = .30$, $p = .011$); thus, the higher males' SD, the higher they rated average weight women's QOL. None of these correlations were statistically significantly different between male and female participants (all $p > 0.1$). The correlations between these variables and social desirability were only moderate at best. Of note, it is not unusual for females to answer in a more socially desirable manner than males (e.g. Bernardi & Guptill, 2008; Dalton & Ortegren, 2011).

Discussion

Summary

The results of the present study revealed that evaluations of thin women were distinct from those of average and overweight women; and gender had an effect on some, but not all weight-based assessments. To review the resolutions of the Research Questions posed: (1) both overweight and underweight women were rated highest in the negative stereotypes typically associated with their weight group [RQ1A and B], (2) gender had an effect in which male participants rated targets, regardless of their weight, higher in anti-fat stereotypes than female participants [RQ1A], (3) male participants rated overweight, but not underweight, women higher in anti-thin stereotypes than female participants [RQ1B], (4) bias was significantly different toward each weight category, with bias being against highest overweight women, lowest against average weight women, with underweight women being in the middle [RQ2], (5) the overall effect of gender on weight bias was such that male participants were higher than female participants in anti-fat bias, but not anti-thin bias [RQ2], (6) participants believed quality of life was greatest for average weight women, lowest for overweight women, and in the middle for underweight women [RQ3], and (7) participant gender had no effect on quality of life ratings [RQ3].

These findings provide evidence that the prejudice experienced by underweight women is a unique form of bias. Specifically, it appears there are several related stereotypes that tend to be attributed to thin, but not overweight or average weight women; thinness is linked to women being viewed as quite unpleasant, but not in the same way or for the same reasons that overweight women are unpleasant. In fact, the assumptions made about thin and overweight women seem to be the opposite of each other. Stereotypes of thin women seem to imply that they

are overly-concerned or even obsessed with themselves and/or their physical features (*superficial, vain, conceited, self-centered*), whereas overweight women are presumed to be deficient in care for themselves and their physicality (*lacking self-control and control of their weight, lacking appropriate eating habits, lacking adequate exercise*). It would seem that, unless a woman is average weight, she is assumed to be either too into how her body looks, or not enough into how her body looks. These findings are very consistent with the findings of past work, especially on anti-fat bias. Research consistently shows that overweight women are assumed to be lazy (Vartanian et al., 2016; Teachman & Brownell, 2001), lack self-discipline (Ferrante et al., 2009; Roehling, 1999), have poor eating habits (Neumark-Sztainer et al.,1999), and have less motivation (Ferrante et al., 2009; Vartanian et al., 2016).

The quality of life ratings extend weight-based evaluations by providing evidence that individuals believe weight affects other dimensions of life, dimensions to which weight may not even be directly related. Participants presumed that overweight women had the lowest quality of life, and that underweight women were better off, but still not as good as average weight women. Participants apparently believed that being overweight or underweight leads to lower fulfillment and satisfaction on everything from enjoyment of life to concentration to capacity for work to satisfaction with sleep.

Additionally, the findings here indicate that, compared to female participants, male participants had more negative attitudes toward the target women, but especially overweight women. First, male participants had higher anti-fat stereotype endorsement overall; they rated targets, regardless of weight, higher in traits like laziness, insecurity, and low self-esteem. Secondly, males rated overweight, but *not* average or underweight women higher in anti-thin stereotypes, which may reflect the strength of their anti-fat attitudes, given that traits like

conceitedness, meanness, self-centeredness, and so forth are typically not associated with being overweight, but are negative nonetheless. These results are not at all surprising, considering past research has found that men tend to display harsher attitudes about women's weight and are higher in anti-fat bias (O'Brien et al., 2013; Lieberman et al., 2012). It seems in evaluating these target women, males were more likely to attribute any negative traits to them, whether the traits were weight-relevant or not. Also telling was the difference between males' and females' bias scores: they had significantly different but close levels of bias against underweight and average weight women, but when it came to overweight women, males had much stronger bias than female participants.

Strengths and Limitations

The main strength of this research is the contribution it makes to the body of literature on weight bias. There is very little work on bias against thin women (or against thin persons more generally), and this study is among the first known to compare anti-thin bias and anti-fat bias directly. Most previous research has only considered bias against overweight individuals, which involved grouping people as either *overweight* or *not overweight*. These results, however, show that anti-thin bias, at least against women, does appear to be its own unique form of bias that occurs at different levels from anti-fat and anti-average bias, and involves a unique family of stereotypes, suggesting that past research may have overlooked important differences in evaluations of underweight versus average weight individuals.

This study was not without limitations, with issues of representativeness and generalizability arising. For one thing, male participants in this study were outnumbered by female participants by approximately 3:1. Thus, although many gender differences were uncovered, it would be desirable to have more equal gender representation in future research. In

addition, much of the sample (47.1%) was overweight/obese, 41.9% were average weight, and only 5.3% were underweight. Further, all participants were from the U.S., and the majority of the sample was white (82.4%), relatively young (62.4% were under 30 years old), and college educated (over 85% had at least some college education). The findings of this study therefore cannot speak to how weight might be evaluated in a sample that is more diverse in terms of age, education level, race, body size, and culture. This study was further restricted in terms of the scope of targets examined in that it only considered attitudes toward women. It would be useful in future research to also consider attitudes toward men of varying weight categories.

An additional limitation involves the mental images that participants conjured while completing the weight evaluations. Because weight is subjective, it is likely that participants varied in what they pictured an underweight, average weight, or overweight woman to look like, and these differences could cause variations in their subsequent evaluations and ratings. For example, the phrase “underweight women” may, for some people, invoke images of emaciated, skeletal bodies ravaged by an eating disorder, while others may simply picture a naturally thin, petite woman. Similarly, when imagining “overweight/obese women,” images may run the gamut from a few extra pounds in the belly to morbid obesity that keeps a person largely bedridden. Participants may also have differed in the race they imagined the targets to be, which, again could cause variations in weight evaluations, given that persons of different races may have their weight evaluated differently. For example, heavier Black women may be rated more positively than thinner Black women, while this may be reversed for White women (Wade, & DiMaria, 2003). In essence, describing targets only by their weight and gender allows for broad and varied images to come to mind, which may ultimately lead to different evaluations.

A final limitation involves the weight evaluation measures used in this study, specifically the anti-thin attitude assessments. Because there are no existing measures of anti-thin bias, items were pieced together by the researcher from essentially one prior study (Dreisbach, 2012), anecdotal testimonies of thin-shaming, and anti-fat attitude measures that were re-worded to refer to thin women. As such, these items have not been tested and validated, and the findings here may not replicate using other measures of anti-thin attitudes. The re-wording of anti-fat bias items is especially problematic, as they were developed to be specifically about anti-fat bias, and these two kinds of attitudes may involve different thoughts and feelings that cannot be accounted for by simply re-directing anti-fat concepts toward thin women instead.

Implications and Concluding Comments

These findings have implications for the way in which weight bias has been researched in the past, as well as the way it should be researched in the future. As discussed, much research up to this point has only compared individuals who are overweight or not overweight, but these findings suggest that much is missed using that type of comparison, especially the distinct anti-thin stereotypes. Moving forward in the realm of anti-thin bias, future work should aim to understand how this anti-thin bias manifests in terms of stereotypes, prejudice, and discrimination, such that anti-thin bias may be understood in terms of its own unique dimensions and characteristics.

Regarding the stereotypic attributions displayed in this study, they may be appropriately viewed in the framework of the Stereotype Content Model (Fiske, Cuddy, Glick, & Xu, 2002). This model proposes that stereotypes related to *competence* and *warmth* tend to vary in such a way that the higher a group is viewed in one dimension, the lower they are viewed in the other (Fiske et al., 2002). Applying this model to this research, it appears that overweight women are

stereotyped as low in competence (*lazy, not in control of their weight*), whereas underweight women are stereotyped as low in warmth (*uptight, mean*). This research only examined negative stereotypes and therefore cannot attest to what these ratings mean for positive ratings on the opposite dimensions, but if the patterns proposed by Fiske and colleagues hold true for weight bias, future research may, and likely will, find that overweight women are stereotyped as high in warmth (but low in competence), whereas underweight women are stereotyped as high in competence (but low in warmth).

Although it is already well-established that overweight women suffer for their size, underweight women presumably face implications of weight bias in their everyday lives as well. Thinness likely leads women to suffer most in terms of their interpersonal relationships. Just the sight of a slim body may set off, in the minds of others, negative stereotypes that lead her to be viewed as unapproachable. Thin women may have fewer opportunities to build new friendships and romantic relationships if strangers assume they are mean and self-obsessed. It is also conceivable that these same assumptions can hinder their opportunities in professional settings, especially ones that require a high level of cordial interpersonal interaction. Although thin women may do well as supermodels or actresses, they may not be perceived as suitable or qualified for other professions, such as being a teacher, nurse, or saleswoman.

More research is also needed to understand exactly why underweight women are viewed less favorably than average weight women, but not as unfavorably as overweight women. If people have the most positive attitudes toward average weight women, then why do they not dislike underweight and overweight women equally? One possibility may be explained by the Attribution-Value Model (Crandall, D'Anello, Sakalli, Lazarus, Wieczorkowska, & Feather, 2001), which states that much bias and prejudice stems from the presence of two crucial factors:

attribution of controllability and value of stereotypical characteristics. In the context of anti-fat bias, the combination of beliefs that weight is controllable and that the overweight have negative characteristics creates the perfect storm to produce anti-fat prejudice (Crandall et al., 2001). Regarding anti-thin bias, the results here suggest that the negative stereotype characteristics component is present, and it would be assumed that if being overweight is controllable, being underweight is as well. Could it therefore be that anti-thin stereotypes are not perceived quite *as negatively* as anti-fat stereotypes, such that people would prefer a mean, self-centered thin woman to an insecure, lazy, fat woman? Alternatively, could it be the controllability that is viewed differently, such that underweight women are seen as responsible for being underweight through positive actions like diet and exercise, while overweight women are seen as responsible for being overweight through *failing* to diet and exercise? Future research can dig deeper into anti-thin bias to understand if, and how, the Attribution-Value model may apply, and why people dislike thin women, but dislike overweight women even more.

One important finding that cannot be ignored is that although evaluations of each weight group did differ, mean scores on all measures suggested that attitudes toward each weight group of women were not negative per se; rather they were essentially neutral, or even leaning toward the positive side. Thin and overweight women were the only groups rated just slightly over the midpoint value for the stereotypes associated with their weight. Weight bias scores against all three groups of women were well below the midpoint, except for males' anti-fat bias which was only slightly below. Also, only overweight women's QOL was rated somewhat below the neutral midpoint. Although ratings were near neutral, the significant differences found in this study support that bias against overweight and thin women does exist. In other words, even if these non-average weight women are not viewed extremely negatively and unfavorably, they are still

viewed less positively, and these differences have consequences, as demonstrated in these findings.

In this study, the most unfavorable attitudes were aimed at overweight women, but underweight women were still viewed more unfavorably than average weight women. These findings are some of the first to attest to the nature of anti-thin bias, given that comparisons of average and underweight individuals are not typically a part of weight bias research. For both overweight and underweight women, their body causes them to become the target of stereotypes, prejudiced attitudes, and assumptions that their lives are not as enjoyable. These evaluations of underweight women are substantial in a society that relentlessly pushes the detrimental thin ideal onto women and girls (Grabe, Ward, & Hyde, 2008). It seems that the kind of women society prefers is not the kind of women they actually like. Women are under strong pressure to be unrealistically thin (e.g. Thompson & Stice, 2001), only to suffer for doing so. Women may be stuck in a lose-lose situation wherein being below average weight has consequences for how others judge them, and being above average weight has similar, maybe even more severe, consequences for how others judge them. The door is open for future research to examine whether, like anti-fat attitudes, anti-thin attitudes are also prevalent in institutional and interpersonal settings, unfairly hindering the lives of individuals on a daily basis. Unfortunately, it appears that women are forced to toe the line between being *too this* and *too that* with their body size and, therefore, face a difficult task should they attempt to avoid becoming the target of weight bias.

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Tables

Table 1

Exploratory Factor Analysis Results Using Principal Axis Factoring and Promax Rotation on Stereotype Items when Rating Overweight/Obese Women

	Anti-Fat Stereotypes	**Anti-Thin Stereotypes**
Industrious - Lazy	.688	.194
Genuine - Superficial	.087	.564
In control of their weight – Not in control of weight	.493	-.009
Intelligent - Unintelligent	.232	.567
Humble – Vain	-.099	.697
Frequently exercises – Rarely exercises	.644	.016
Kind – Mean	-.022	.687
Has self-control – Lacks self-control	.753	.064
Motivated - Unmotivated	.762	.173
Modest - Conceited	-.142	.687
Altruistic – Self-centered	.033	.617
Giving – Stingy	.043	.766
Laid back - Uptight	-.145	.486
Has high self-esteem – Has low self-esteem	.676	-.017
Fast – Slow	.816	-.181
Has good eating habits – Has poor eating habits	.860	-.120
Unassertive - Controlling	-.203	.177
Secure - Insecure	.689	-.124

Table 2

Exploratory Factor Analysis Results Using Principal Axis Factoring and Promax Rotation on Stereotype Items when Rating Average Weight Women

	Anti-Fat Stereotypes	**Anti-Thin Stereotypes**
Industrious - Lazy	.313	.287
Genuine - Superficial	-.113	.764
In control of their weight – Not in control of weight	.651	-.066
Intelligent - Unintelligent	.277	.574
Humble – Vain	-.097	.836
Frequently exercises – Rarely exercises	.521	-.206
Kind – Mean	.086	.720
Has self-control – Lacks self-control	.646	.134
Motivated - Unmotivated	.639	.219
Modest - Conceited	-.205	.806
Altruistic – Self-centered	.005	.650
Giving – Stingy	.134	.740
Laid back - Uptight	-.219	.747
Has high self-esteem – Has low self-esteem	.684	-.024
Fast – Slow	.684	-.068
Has good eating habits – Has poor eating habits	.772	-.105
Unassertive - Controlling	-.272	.139
Secure - Insecure	.469	.174

Table 3

Exploratory Factor Analysis Results Using Principal Axis Factoring and Promax Rotation on Stereotype Items when Rating Underweight/thin Women

	Anti-Fat Stereotypes	**Anti-Thin Stereotypes**
Industrious - Lazy	.425	.017
Genuine - Superficial	.104	.621
In control of their weight – Not in control of weight	.573	-.097
Intelligent - Unintelligent	.286	.398
Humble – Vain	-.002	.762
Frequently exercises – Rarely exercises	.325	-.287
Kind – Mean	.061	.701
Has self-control – Lacks self-control	.668	-048
Motivated - Unmotivated	.499	-.100
Modest - Conceited	-.107	.711
Altruistic – Self-centered	.007	.791
Giving – Stingy	.002	.698
Laid back - Uptight	-.131	.642
Has high self-esteem – Has low self-esteem	.661	.072
Fast – Slow	.612	-.221
Has good eating habits – Has poor eating habits	.687	.092
Unassertive - Controlling	-.164	.495
Secure - Insecure	.668	.235

Table 4

Men and Women's Anti-thin and Anti-fat Stereotype Ratings

	Anti-Fat Stereotypes			
	Men		Women	
	M	*SD*	*M*	*SD*
Overweight women	29.88	5.15	29.18	5.26
Average weight women	24.51	4.60	23.75	4.38
Underweight women	26.25	4.86	24.88	5.06
	Anti-Thin Stereotypes			
	Men		Women	
	M	*SD*	*M*	*SD*
Overweight women	22.99	4.31	20.78	4.28
Average weight women	22.05	4.38	21.64	4.14
Underweight women	25.49	4.91	24.94	4.35

Note: Items were rated 1-5 with higher scores indicating greater stereotypicality ratings. Possible score range for anti-fat stereotypes is 9-45. Possible score range for anti-thin stereotypes is 8-40.

Table 5

Men and Women's Weight Bias Scores

	Men		**Women**	
	M	*SD*	*M*	*SD*
Anti-Fat Bias	36.08	1.30	28.11	10.65
Anti-Average Bias	22.73	8.60	21.50	7.75
Anti-Thin Bias	29.62	9.60	27.28	9.68

Note: Items were rated 1-7 with higher scores indicating higher bias. Possible score range is 10-70.

Table 6

Men and Women's Quality of Life Ratings

	Men		**Women**	
	M	*SD*	*M*	*SD*
Overweight/obese QOL	41.93	8.76	42.29	7.50
Average weight QOL	54.83	8.51	55.01	8.30
Underweight/thin QOL	49.92	8.99	50.47	8.86

Note: Items were rated 1-5 with higher scores indicating higher quality of life. Possible score range is 16-80.

Appendix A

Stereotype Items

For the following set of questions, please answer regarding your thoughts, feelings, and attitudes, toward [OVERWEIGHT/OBESE; AVERAGE WEIGHT; UNDERWEIGHT/THIN**]** women.

1. Lazy[a] – Industrious
2. Superficial[b] - Genuine
3. In control of their weight - Not in control of their weight[a]
4. Intelligent - Unintelligent[b]
5. Humble – Vain[b]
6. Rarely exercises[a] - Frequently exercises
7. Kind – Mean[b]
8. Has self-control - Lacks self-control[a]
9. Motivated – Unmotivated[a]
10. Conceited[b] – Modest
11. Altruistic - Self-centered[b]
12. Giving - Stingy[b]
13. Uptight[b] - Laid back
14. Has high self-esteem - Has low self-esteem[a]
15. Fast - Slow[a]
16. Has good eating habits - Has poor eating habits[a]
17. Secure – Insecure[a]

[a] Anti-fat stereotypes
[b] Anti-thin stereotypes

Appendix B

Weight Bias Items

Please indicate how much you agree/disagree with the following statements:

1. [Overweight/obese; average weight; underweight/thin] women are not sexually attractive.
2. [Overweight/obese; average weight; underweight/thin] women make me feel somewhat uncomfortable.
3. [Overweight/obese; average weight; underweight/thin] women are physically attractive.
4. There is nothing wrong with an [overweight/obese; average weight; underweight/thin] woman wearing a bathing suit at the beach.
5. I really don't like [overweight/obese; average weight; underweight/thin] women that much.
6. I am very comfortable being around [overweight/obese; average weight; underweight/thin] women.
7. [Overweight/obese; average weight; underweight/thin] women only have themselves to blame for their weight.
8. I dislike women who are [overweight/obese; average weight; underweight/thin].
9. I have women friends who are [overweight/obese; average weight; underweight/thin].
10. If I were an employer looking to hire, I might avoid hiring an [overweight/obese; average weight; underweight/thin] woman.

Appendix C

Quality of Life Items

Please rate how high or low you believe [overweight/obese; average weight; underweight/thin] women are in the following domains

1. Quality of life
2. Satisfaction with health
3. Physical pain
4. Need for medical treatment
5. Enjoyment of life
6. Feeling that life is meaningful
7. Concentration
8. Feeling safe
9. Energy for everyday life
10. Acceptance of bodily appearance
11. Ability to get around
12. Satisfaction with sleep
13. Ability to perform daily living activities
14. Capacity for work
15. Satisfaction with self
16. Frequency of negative feelings like despair, anxiety, and depression

Appendix D

Social Desirability Scale-17

Below you will find a list of statements. Please read each statement carefully and decide if that statement describes you or not. If it describes you, check the word "true"; if not, check the word "false".

1. I sometimes litter
2. I always admit to my mistakes openly and face the potential negative consequences
3. In traffic, I am always polite and considerate of others
4. I always accept others' opinions, even when they don't agree with my own
5. I take out my bad moods on others now and then
6. There has been an occasion when I took advantage of someone else
7. In conversations I always listen attentively an
8. I never hesitate to help someone in case of emergency
9. When I have made a promise, I keep it- no ifs, ands, or buts
10. I occasionally speak badly of others behind their back
11. I would never live off other people
12. I always stay friendly and courteous with other people, even when I am stressed out
13. During arguments I always stay objective and matter-of-fact
14. There has been at least one occasion when I failed to return an item that I borrowed
15. I always eat a healthy diet
16. Sometimes I only help because I expect something in return